

AMENDMENTS TO THE CLAIMS

1 1-10. (Cancelled)

1 11. (Currently Amended) A ~~The~~ wireless communication system ~~of~~
2 ~~claim 10 comprising:~~

3 a radio module operable to communicate data between a host and at least one

4 external device;

5 at least one digital module operable to process data communicated by said radio
6 module;

7 a clock generator for generating first and second clock signals for use by said
8 digital module;

9 a timer operable to count clock cycles of said first and second clock signals;
10 power management logic operable to:

11 control said clock generator to cause said clock generator to generate said
12 first clock signal when said wireless communication system is
13 operating in a first power mode and to generate said second clock
14 signal when said wireless communication system is operating in a
15 second power mode; and

16 calibrate the frequency of said clock generator while said wireless
17 communication system is operating in said second power mode;

18 and

19 a timer management module operable to maintain a cumulative count of the
20 number of clock cycles counted by said timer during a predetermined time
21 interval, wherein said timer is operable to count the number of clock
22 cycles for said first clock when said wireless communication system is
23 operating in said first power mode and is further operable to count the
24 number clock cycles for said second clock signal when said wireless
25 communication system is operating in said second power mode;

26 wherein the number of clock cycles counted by said timer when said wireless
27 communication system is operating in said second power mode is

28 converted to an equivalent number of clock cycles that would have been
29 generated by said first clock by using an adjustment factor based on the
30 number of cycles said first clock would generate during a single cycle of
31 said second clock.

1 12. (Cancelled)

1 13. (Currently Amended) A The wireless communication system, ~~of~~
2 claim 12 comprising:
3 a radio module operable to communicate data between a host and at least one
4 external device;
5 at least one digital module operable to process data communicated by said radio
6 module;
7 a clock generator for generating first and second clock signals for use by said
8 digital module;
9 a timer operable to count clock cycles of said first and second clock signals, said
10 timer operable to count the number of clock cycles for said first clock
11 when said wireless communication system is operating in said first power
12 mode and said timer does not count the number of clock cycles for said
13 first clock signal when said wireless communication system is operating in
14 said second power mode;
15 a timer management module operable to maintain a cumulative count of the
16 number of clock cycles counted by said timer during a predetermined time
17 interval, wherein said timer management module is operable to generate
18 updated timing information using information provided by said power
19 management logic regarding the duration of the time interval that said
20 wireless communication system is operating in said second power mode;
21 and
22 power management logic operable to:
23 control said clock generator to cause said clock generator to generate said
24 first clock signal when said wireless communication system is

25 operating in a first power mode and to generate said second clock
26 signal when said wireless communication system is operating in a
27 second power mode; and
28 calibrate the frequency of said clock generator while said wireless
29 communication system is operating in said second power mode.

1 14-23. (Cancelled)

24. (Currently Amended) A ~~The~~ method of claim 23 of managing power in a wireless communication system having a radio module operable to communicate data between a host and at least one external device and at least one digital module operable to process data communicated by said radio module, the method comprising:

generating a high-frequency first clock signal for use by said digital module when said wireless communication system is operating in a first power mode and a lower frequency second clock signal for use by said digital module when said wireless communication system is operating in a second power mode; and

using power management logic to:

control said clock generator to cause said clock generator to generate said first clock signal when said wireless communication system is operating in a said first power mode and to generate said second clock signal when said wireless communication system is operating in said second power mode; and

calibrate the frequency of said clock generator while said wireless

communication system is operating in said second power mode.

using a timer to count clock cycles of said first and second clock signals;
using said timer to count the number of clock cycles for said first clock when said
wireless communication system is operating in said first power mode and
using said timer to count the number clock cycles for said second clock
signal when said wireless communication system is operating in said
second power mode;

and

using a timer management module to maintain a cumulative count of the number of clock cycles counted by said timer during a predetermined time interval, wherein the number of clock cycles counted by said timer when said wireless communication system is operating in said second power mode is converted to an equivalent number of clock cycles that would

31 have been generated by said first clock by using an adjustment factor
32 based on the number of cycles said first clock would generate during a
33 single cycle of the said second clock.

1 25. (Cancelled)

1 26. (Currently Amended) A The method of claim 25, further of
2 managing power in a wireless communication system having a radio module operable
3 to communicate data between a host and at least one external device and at least one
4 digital module operable to process data communicated by said radio module, the
5 method comprising:

6 generating a high-frequency first clock signal for use by said digital module when
7 said wireless communication system is operating in a first power mode
8 and a lower frequency second clock signal for use by said digital module
9 when said wireless communication system is operating in a second power
10 mode; and

11 using power management logic to:

12 control said clock generator to cause said clock generator to generate said
13 first clock signal when said wireless communication system is
14 operating in a said first power mode and to generate said second
15 clock signal when said wireless communication system is
16 operating in said second power mode; and

17 calibrate the frequency of said clock generator while said wireless
18 communication system is operating in said second power mode

19 using a timer to count clock cycles of said first and second clock signals, wherein
20 said timer counts the number of clock cycles for said first clock when said
21 wireless communication system is operating in said first power mode and
22 said timer does not count the number of clock cycles for said first clock
23 signal when said wireless communication system is operating in said
24 second power mode;

25 using a timer management module to maintain a cumulative count of the number
26 of clock cycles counted by said timer during a predetermined time
27 interval; and
28 using said timer management module to generate updated timing information
29 using information provided by said power management logic regarding the
30 duration of the time interval that the wireless communication system is
31 operating in said second power mode.